

## THE STATE OF UTAH OFFICE OF STATE ENGINEER SALT LAKE CITY

WAYNE D. CRIDDLE
STATE ENGINEER

REPORT

TO: Mr. Hubert C. Lambert

FROM: Robert F. Guy

DATE: July 29, 1964

Find attached a U.S.G.S. Daily Discharge sheet that was submitted to this office by Mr. Zelph Calder.

On this sheet, Mr. Calder has computed the amount of water that he feels belongs in the Matt Warner.

His method for computation of the distribution of the waters of Pot Creek is quite a bit different than the method used by this office.

In paragraph #1, Mr. Calder states that on May 2, 1964, the Matt Warner Reservoir had accumulated 210 acre feet. Of this 210 acre feet, he credits 103 acre feet (which agrees with the commissioners records) to Bill Allen and the remainder, of 107 acre feet, to the Matt Warner. The U.S.G.S. Record indicates that up to May 2, 144.6 acre feet flowed past the gage. This leaves 65.4 acre feet that must have come in below the U.S.G.S. Gage and above the Matt Warner Dam. This 65.4 acre feet has not been accounted for in the distribution, as only the U.S.G.S. Record is used. Obviously, a portion of this water would belong to Bill Allen. If this "extra" water is to be considered, it would be the suggestion of this office that the amount belonging to Bill Allen be calculated as follows: Starting on May 16, (the first recorded day of flow in Pot Creek) add a sufficient number of second feet to the daily discharge to make the daily total 5.0 cfs. This would be cut off on April 28 as after that date Bill Allen received full credit for 5.0 cfs. Thus Bill Allen would have an additional credit of 57 acre feet and the Matt Warner would retain 8.4 acre feet.

Paragraph 1,2, and 3 do not take into consideration the fact that the gate to the Matt Warner was opened wide so as to release the maximum flow (11.16 cfs). This was done so that a portion of the accumulated backlog could be released along with the inflow, to the rights below the Matt Warner.

This office made some rough calculations using Mr. Calder's logic with the calculations carried out from May 27 till the end of June. The results are as follows:

333.68 ac. ft. - Mr. Calder's figure up to May 26.

14.90 ac. ft. - Mr. Calder's credit after May 26.

348.58 ac. ft. - Total credit to Mr. Calder by his method of calculation.

103.00 ac. ft. - belonging to Bill Allen but not accounted for in Mr. Calder's calculations.

57.00 ac. ft. - Bill Allen's share of the 107.00 ac. ft. 122.54 ac. ft. - accumulated by lower rights after flew from Matt Warner was restricted or shut off.

282.54 ac. ft. - credit to lower rights.

348.58
282.54
66.04 ac. ft. - the amount of water that should remain in the Matt Warner.

This office has kept an extra carbon copy of this letter which can be given to Mr. Calder if you so desire.

Calculations of this office show that the Matt Warner should have approximately 192.00 acre feet.

Uniter "qates Department of the Interior—Geolog" &L Survet—Water Resources Division 9-2116 Preliminary data (Rev. June 61) Not for publication

STA. No.

Pot Creek above diversions, near Vernal, Utah Daily discharge, in second-feet, of \_\_

, for the year ending September 30, 19 64

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Sept.																														
Aug.																														
July	0		0 0	0 0	o	0	0																							
June	7.7			۲. ر	. (	5.8			2.0		2.8	2.5				2.5		3.1	2.2	3.2	4.0	2.2	1.4	6.	9.	7.	.5	7.	.2	
May	15	26	15	10	8.6		6.3	6.1	6.5		9.8	12	15	15	17	20	19	18	18	18	18	16	14	13	13	12	11	10	11	9.8
Apr.	0	0	0	0	0	0	0	0	00	0	0	0	0	0	П	2	2	2	2	က	ന	ന	m	3	3.6	4.5	4.4	•	13	
Mar.	auge was	ras 103	. 0n	ran for	in.	ft.		through		servoir			Reservoir	7 ac.ft.	7.68" "	3 " "	11 11 99	3.68" "	0	3.68 res-	shortage									
Feb.	elevation ga	are	7 ac. feet		.68 ac. fi			ש	e into it.	came into re				flowing: 10		5	16	33	1c.ft. 32	-	ervoir									
Jan.	servoir el	hich Aller	are was 1(	.16 sec. f	4 days = 7	o's share			e than came into	ft.			the Matt W	ceased					.2 or 320 ac.ft.	21										
Dec.	1964 Matt Warner Reservoir	feet, of w	arner's sh	eleased 11	ft. for 24 days =	Allen's and Colorado's share		d May 12 5	ervolr mor	y 26 166 acre	. ft.	,	uld be in	Pot Creek					oir was 94	t in June										
Nov.	1964 Matt	92.8 or 210 ac.	reet and Matt Warner's share was 107 ac.	said date Mr. Guy released 11.16 sec. ft, which	,16 ac.	Allen's a		Mott Times 3 and May 12 53	the Marner Keservolr more	From May 2 to May	of 11 sec.		Hence, there should be in the Matt Warner	its credit after Pot Creek				ţ	Elevation of reservoir was 94.2	highest point in June										
Oct.		at 3				excess of		† †		From M	in excess	;		to its cre					Elevation	at its hig						l m				
Day	H					9 1	- 0	0 0	10 %	11	12	ee ;		_	9 1	77	20 (	10		22	2 6	3 5	# Z	07	1 20	77	× ×	\$ C	30	747

408.3\* 57.3\*

\*4.96

MEAN ACRE-FEET

DATE	FLOW	HOURS OF FLOW	FLOW TO Z. CALDER	AC. FT. TO Z. CALDER	AVERAGE DALLY FLOW OF POT CREEK USGS	FLOW TO Z. CALDER CALCULATED FROM AVERAGE DAILY FLOW	AC. FT. TO Z. CALDER CALCU- LATED FROM AVERAGE DAILY FLOW	REMARKS
Apr. 26	N.	w	5.0	0.21	3.6	0	0	First 5.0 cfs to Bill Allen
	بر س	6	0.3	0.07	4.5	0	0	
	0.9	7	1.0	0.58	4.4	0	0	
	1.6	15	4.1	5.08	7.8	2.8	5.6	
Apr. 30	7.4 16.0 16.0	8646	2.4 2.6 11.0 18.0	1.58 1.29 3.64 8.93	13.0	8.0	16.0	
May 4	12.0	1	1.0	0.33	10.0	0	0	First 5.0 cfs to Bill Allen Second 6.0 cfs to Colo. Rights
May 11	12.0	Ŋ	1.0	τή <b>•</b> 0	10.0	0	0	
May 12	12.0	7	1.0	0.58	9.8	0	0	
May 13	12.0	70.0	1.0	0.41 2.32	12.0	1.0	2.0	E E
Мау 14	12.0	12	1.0	0.99	11.0	0	0	= = = = = = = = = = = = = = = = = = = =
TOTAL ACRE FO Z. CALDER CAI	RE FOOT ALLOT	TOTAL ACRE FOOT ALLOTMENT TO Z. CALDER CALCULATED BY HOUR!	MENT TO BY HOURLY DIURNAL	26.42		11.8	23.60	
TOTAL AC. FT. DAILY FLOW		CALCULATED FROM AVERAGE	m average	23.60				
DIFFERENCE	SE BETWEE ION	DIFFERENCE BETWEEN THE TWO METHODS COMPUTATION	TETHODS OF	2.82				

WOTE: All other days in April, May, and June were deleted because the diurnal curve was such that the entire curve for each 24 hour period fell either entirely above or entirely below the 5.0 cfs mean in April or the 11.0 cfs mean in May and June.